

WHAT IS CLAIMED IS:

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1. A radio relay apparatus for relaying communications between a base station and a mobile station and transmitting monitoring information including a formal identification code thereof to a  
10 monitoring apparatus in a mobile communication system, comprising:

a determination unit configured to determine a first identification code used as a temporary identification code of the radio relay  
15 apparatus, said first identification code being determined in conjunction with an identification code of the base station that serves as a target to be relayed to/from by the radio relay apparatus; and

a receiver configured to receive a second  
20 identification code determined by the monitoring apparatus, said monitoring apparatus determining the second identification code based on the first identification code, said second identification code being determined to be different from identification  
25 codes of other radio relay apparatuses,

wherein

the second identification code is used as the formal identification code of the radio relay apparatus.

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2. The radio relay apparatus as claimed  
in claim 1, wherein

the determination unit combines a part of  
the identification code of the base station and a  
5 characteristic code of the radio relay apparatus,  
and uses the combined code as the first  
identification code.

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3. The radio relay apparatus as claimed  
in claim 1, further comprising a modification  
determination unit configured to determine whether  
15 the formal identification code of the radio relay  
apparatus needs to be modified,

wherein

when the modification determination unit  
determines that the formal identification code of  
20 the radio relay apparatus needs to be modified, the  
determination unit determines the first  
identification code used as the temporary  
identification code of the radio relay apparatus on  
the basis of an identification code of another base  
25 station.

30 4. The radio relay apparatus as claimed  
in claim 1, further comprising a transmitter  
configured to transmit the monitoring information  
including the formal identification code of the

radio relay apparatus to the monitoring apparatus.

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5. A monitoring apparatus for monitoring a mobile communication system including a base station, a mobile station, and a radio relay apparatus for relaying communications between the  
10 base station and the mobile station, comprising:

a receiver configured to receive a first identification code from the radio relay apparatus used as a temporary identification code of the radio relay apparatus;

15 a determination unit configured to determine a second identification code used as a formal identification code of the radio relay apparatus; and

a transmitter configured to transmit the  
20 formal identification code to the radio relay apparatus.

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6. The monitoring apparatus as claimed in claim 5, wherein the determination unit determines the second identification code that is different from formal identification codes of any other radio  
30 relay apparatuses.

7. A method of determining a formal identification code of a radio relay apparatus in a mobile communication system including the radio relay apparatus for relaying communications between a base station and a mobile station, and a monitoring apparatus for monitoring the mobile communication system by using monitoring information including the formal identification code of the radio relay apparatus, comprising the steps of:

determining, by the radio relay apparatus, a first identification code used as a temporary identification code of the radio relay apparatus in conjunction with an identification code of the base station serving as a target to be relayed to/from; and

determining, by the monitoring apparatus, a second identification code based on the first identification code, said second identification code being determined to be different from formal identification codes of other radio relay apparatuses, and the radio relay apparatus using the second identification code as the formal identification code thereof.